

Silicon NPN Power Transistors

2SD1879

DESCRIPTION

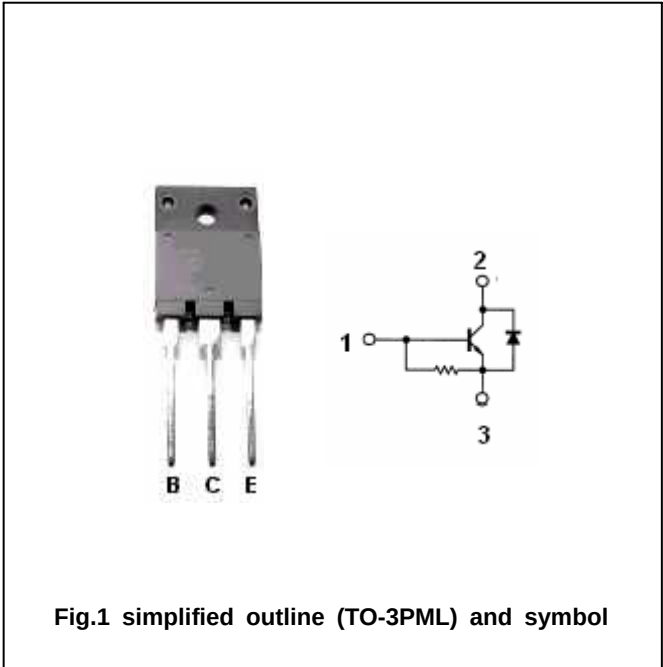
- With TO-3PML package
- High speed
- High breakdown voltage
- High reliability
- Built in damper diode

APPLICATIONS

- Color TV horizontal deflection output
- Color display horizontal deflection output.

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Base        |
| 2   | Collector   |
| 3   | Emitter     |



Absolute maximum ratings(Ta=°C)

| SYMBOL           | PARAMETER                   | CONDITIONS           | VALUE   | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | Open emitter         | 1500    | V    |
| V <sub>CEO</sub> | Collector-emitter voltage   | Open base            | 800     | V    |
| V <sub>EBO</sub> | Emitter-base voltage        | Open collector       | 6       | V    |
| I <sub>C</sub>   | Collector current           |                      | 6       | A    |
| I <sub>CM</sub>  | Collector current-peak      |                      | 20      | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25°C | 60      | W    |
|                  |                             |                      | 3       |      |
| T <sub>j</sub>   | Junction temperature        |                      | 150     | °C   |
| T <sub>stg</sub> | Storage temperature         |                      | -55~150 | °C   |

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

| SYMBOL                | PARAMETER                            | CONDITIONS                                                                                                         | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----|------|-----|------|
| V <sub>CEO(SUS)</sub> | Collector-emitter sustaining voltage | I <sub>C</sub> =100mA ; I <sub>B</sub> =0                                                                          | 800 |      |     | V    |
| V <sub>CEsat</sub>    | Collector-emitter saturation voltage | I <sub>C</sub> =5A ; I <sub>B</sub> =1A                                                                            |     |      | 5   | V    |
| V <sub>BESat</sub>    | Base-emitter saturation voltage      | I <sub>C</sub> =5A ; I <sub>B</sub> =1A                                                                            |     |      | 1.5 | V    |
| I <sub>CBO</sub>      | Collector cut-off current            | V <sub>CB</sub> =800V ; I <sub>E</sub> =0                                                                          |     |      | 10  | μ A  |
| I <sub>EBO</sub>      | Emitter cut-off current              | V <sub>EB</sub> =4V ; I <sub>C</sub> =0                                                                            | 40  |      | 130 | mA   |
| I <sub>CES</sub>      | Collector cut-off current            | V <sub>CE</sub> =1500V                                                                                             |     |      | 1.0 | mA   |
| h <sub>FE-1</sub>     | DC current gain                      | I <sub>C</sub> =1A ; V <sub>CE</sub> =5V                                                                           | 8   |      |     |      |
| h <sub>FE-2</sub>     | DC current gain                      | I <sub>C</sub> =5A ; V <sub>CE</sub> =5V                                                                           | 5   |      | 10  |      |
| V <sub>F</sub>        | Diode forward voltage                | I <sub>EC</sub> =6A ; I <sub>B</sub> =0                                                                            |     |      | 2   | V    |
| t <sub>f</sub>        | Fall time                            | I <sub>C</sub> =4A; R <sub>L</sub> =50 Ω ; V <sub>CC</sub> =200V<br>I <sub>B1</sub> =0.8A; - I <sub>B2</sub> =1.6A |     | 0.1  | 0.3 | μ s  |

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PACKAGE OUTLINE

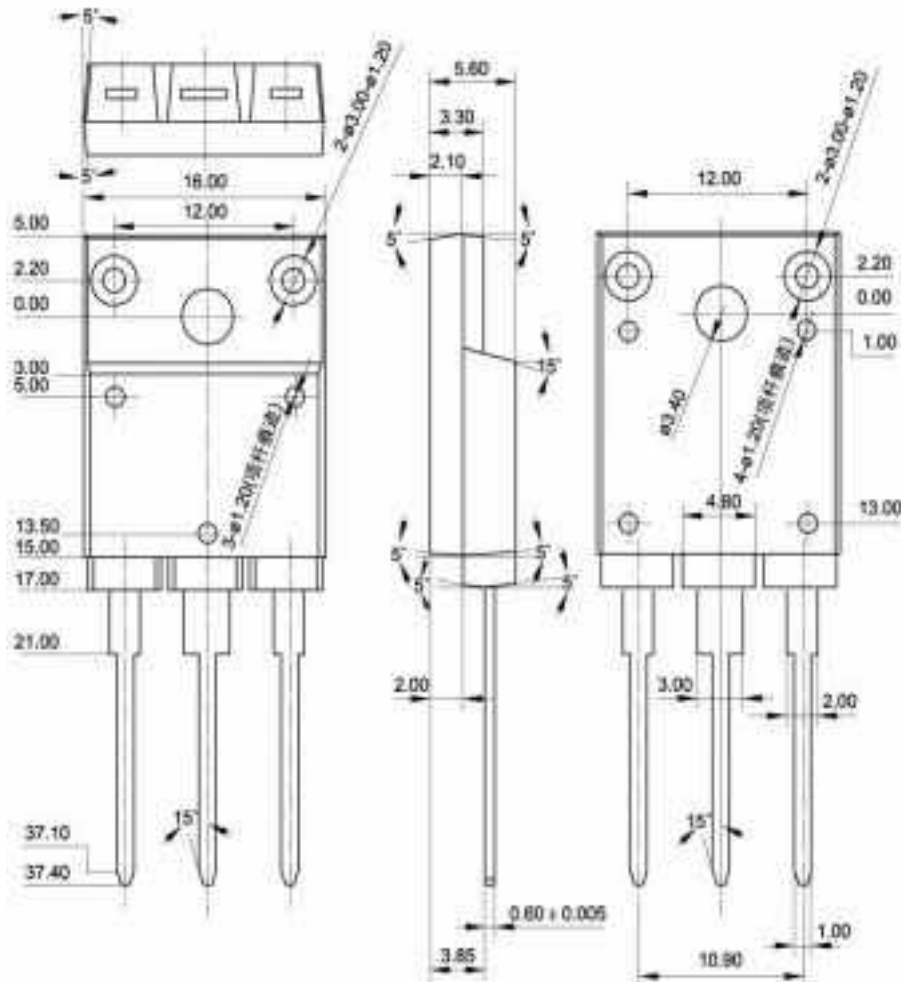


Fig.2 Outline dimensions

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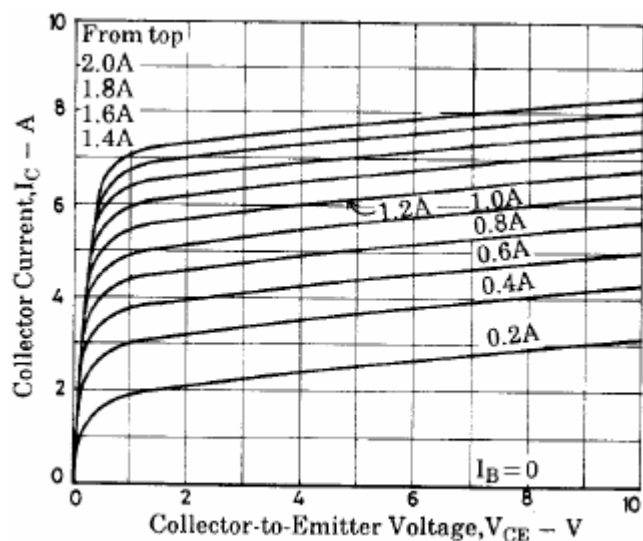


Fig.3 Static Characteristic

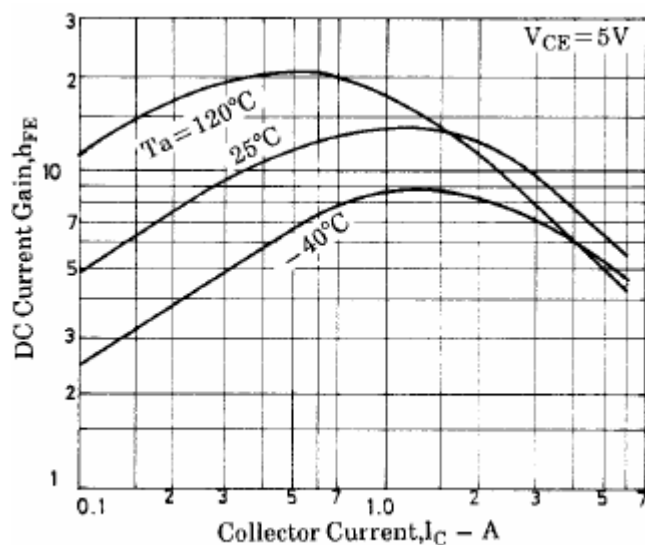


Fig.4 DC current Gain

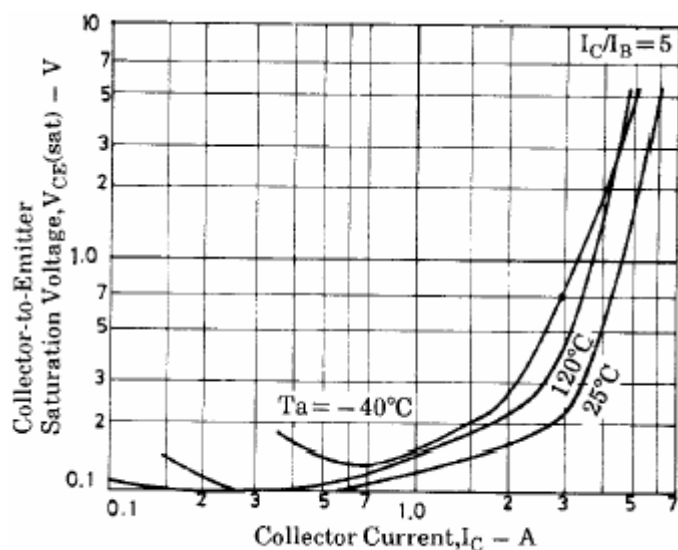


Fig.5 Collector-Emitter Saturation Voltage

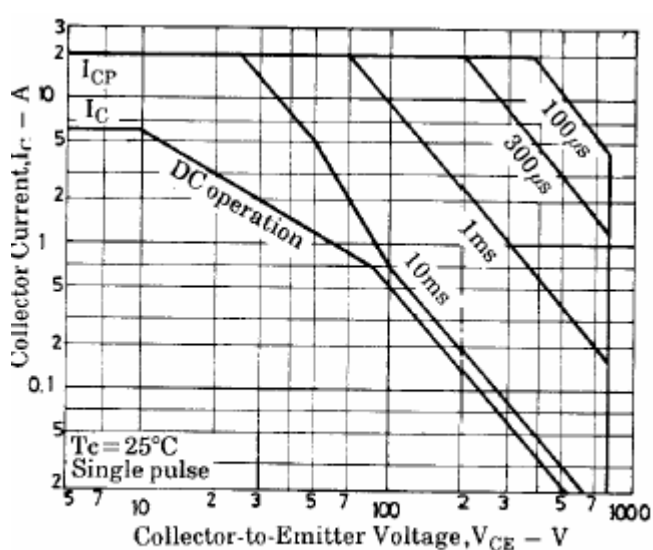


Fig.6 Safe Operating Area